

**Disposition of Tendrils in the Bud.**—In observing a number of cucurbits growing in my garden last season, I noticed that the tendrils were variously arranged previous to their full expansion.



There were three positions, and not far from the same number of species belonging to each sort, with possibly some preponderance in favor of the straight ones. They were either (1) unfolded or straight; (2) rolled from the apex downward upon the upper face, i. e., circinate; or (3) rolled backward from the apex, and the whole coil bent forward upon the upper face so as to make a loop or handle projecting beyond the coil. This last kind might well be called *ansulate*. The straight tendrils were found in balsam-apple, gherkin, teasel and gooseberry cucumbers and the dish rag plant. They were at first necessarily very short, but in the climbing species soon exceeded the main axis from which they arose. The circinate ones were seen in the squash, pumpkin, wild cucumber (*Echinocystis*) and star-cucumber; and the ansulate in muskmelon, common cucumber, and *Mukia scabrella*. Some species of the genus *Cucumis* have straight and some ansulate tendrils, but the species of the other genera are uniform, so far as observed.—J. C. ARTHUR.

**Autumn Color of the Bartram Oak.**—It may be of interest to note that the autumn leaves of *Quercus heterophylla* color like the scarlet *Q. coccinea*. The early leaves of the season are more or less entire, but when the plants are growing freely, and make a secondary growth, as vigorous oaks often do, the later leaves much resemble *Quercus coccinea*. Indeed, when mixed it is difficult to separate them. I think with Martindale it is a good species, and that its relationship is with the Scarlet and Black oak.—THOMAS MEEHAN.

**The Compound Crystals of Begonia.**—A few weeks ago the students in the botanical laboratory of Wabash College were investigating plant crystals. One member of the class was working with the petiole of one of the large leaved Begonias and examining its well known compound crystals. Upon using his reagents to determine their chemical nature, he found his weaker acids slow to produce any effect, and determined, at any rate, to destroy the crystals, drew under the cover glass some undiluted sulphuric acid. Of course the crystals at once responded and began to dissolve rapidly, but the investigator's attention was at once attracted by the fact that the compound crystals had become bundles of raphides. Upon calling my attention to the fact I directed other members of the class to repeat the experiment, and in every case the compound crystals wasted away to bundles of raphides, lying in the direction of the longer axes of the crystals.

In this connection might be mentioned the fact that the same class found a better display of cystoliths in the stems of the common *Pilea pumila* than in any other plant studied. The cystoliths were very large, lying of course parallel with the fibers of the stem, and